

DOING THE SPLITS



By 1stLt. Justin Wortendyke, USMC

Being the new guy in the squadron has its ups and downs. I certainly didn't expect to fly out to my squadron's spring detachment in Yuma, Ariz. However, skeds wanted me to start my low-altitude-tactics (LAT) qualification to speed up my combat-wingman qualification. Flying on the CO's wing, the cross-country to Yuma was uneventful. Once there, I was slated to get my LAT qual on a quick out-and-in with the CO.

We took off out of Yuma after a thorough brief and headed to the range. As we descended through 5,000 feet, we completed the low-altitude checks, and the CO fell back to my six as a chase plane. He let me get comfortable with some mild maneuvering.

After a few check turns to get me headed in the right direction, the skipper asked, "How are you feeling?"

I rogered with a "Good, sir," and started to get a rush of excitement. I was ready to get into the meat of the flight.

The CO called a hard left for 90 degrees. From 550 feet AGL, I checked my left clear, rolled and started a smooth 5-G pull across the horizon. Just then, my left wing dropped sharply. My first thought was the roll-off was just mere turbulence or rusty stick skills. I thought, "Why can't I do a level hard turn for the CO?"

As I brought my left wing back up, I realized this maneuver was taking far too much right stick. I increased right stick to compensate for the heavy left

wing. I fed in coordinated rudder to keep the jet tracking, threw the throttles forward, and began to pull up.

"Watch your nose!" the CO called, but that factor was far from my mind at this point. As my nose came back up through the horizon, I jammed the throttles into afterburner and waffled my way upward, away from the hard ground. I then got the master-caution tone, with the associated FCS (flight-control system) caution and aural warning. I momentarily was preoccupied with the controls, so I ignored Betty. I was far more concerned with flying away from the ground.

As I passed 1,000 feet, I finally had a chance to look outside. I expected to see blood from a bird all over my wing, but instead, I saw my outboard leading-edge flap (LEF) sticking straight up, 90 degrees the wrong way.

My CO asked, "How are you doing up there?"

With a clear head and concise comm, I was able to get out, "Not good, sir."

I know—a very descriptive response, and just what a flight lead wants to hear. I regrouped, took a deep breath and said, "My left leading-edge flap is sticking straight up like a barn door."

Once again, I could have been a little more helpful, as I heard his response, "Oh crap," followed by, "Keep climbing."

I decided to be a little more descriptive this time and clarified it was my left, outboard leading-edge flap. The CO had me verify my problem once more as I began to relay to him what my FCS page showed. I retained the lead as the skipper helped keep me in




Photo by MCSN John Wagner. Modified.

the area. We switched to base on the aux radio. They broke out the big book and made a call to MAWTS-1 to get the resident expert to help. When I finally caught up on the primary-range frequency, I found the CO had coordinated our flight back and declared the emergency for me. I punched 7700 into my transponder.

We circled a couple times to go through the slow-flight checklist and got down the gear. We also burned some extra gas to get down to my final speed. The -1 expert showed up at the squadron and had a calming voice on the radio. He assured me that we had done everything correctly—so far.

We flew a straight-in approach to the duty runway with the CO calling out my speeds to make sure I didn't touch down too fast and blow a tire. I landed at 190 knots, the nose gear speed. I rolled out to the end and taxied back as my CO circled to land.

I was greeted by the ordnance guys, who checked my brakes and de-armed my Sidewinder. With a jaw-dropping look, they pointed to the flap standing up the wrong way. Everyone seemed happy to have me back after they heard what had happened. The maintenance department showed me the part that had failed, an original part on my FA-18A+ Hornet. This event can help remind us that our aging aircraft can fail at inopportune times. 

1stLt. Wortendyke flies with VMFA-312.

Hornet Runaway Leading-Edge-Flap Failures

Bravo zulu to the author and VMFA-312 for this successful recovery. Failures of the FA-18A-D LEF system have resulted in three aircraft losses in the last three years. Lesser failures of the LEF system have resulted in flaps locking with a deflection that did not impact controllability. Failures may involve one or both spans of leading-edge flaps. Seven cases of outboard-only upward runaways have been documented in the last 18 months. A mishap-response team from NavAirSysCom analyzed the LEF system and found that a 400-flight-hour, recurring wingtip-to-wingtip inspection of the entire LEF system was necessary. However, despite ongoing plans to implement such an inspection, sufficient logistics support will not be available in time to sustain required fleet operating levels.

A revised inspection has been developed that is supportable and maintains the residual risk at accepted levels until the 400-hour inspection is in place. Target release date for the inspection was June 1, 2007, as a bulletin series comprised of AFB-644, AYB-1182, AYB-1183, and AYB-1184 with a compliance time of next 200-hour phase for the initial inspection and a recurring interval of every 200 flight hours. These bulletins are a subset of the eventual wingtip-to-wingtip inspection. Completing the inspection bulletins in conjunction with the 200-flight-hour phase will minimize aircraft down time.

Commanders should stress the importance of zone inspections when conducting maintenance in the LEF areas of the aircraft. No later than the fourth inspection cycle, the bulletins will be replaced by a full wingtip-to-wingtip inspection.—Maj. Duke Budde, USMC, FA-18A-D analyst, Naval Safety Center.